

Safe Cleaning and Disinfecting in Early Childcare Centers for COVID-19



Utah APPLETREE Program



MISSION & VISION



The Utah Department of Health's mission is to protect the public's health through preventing avoidable illness, injury, disability, and premature death; assuring access to affordable, quality health care; and promoting healthy lifestyles.

Our vision is for Utah to be a place where *all* people can enjoy the best health possible, where *all* can live and thrive in healthy and safe communities.



STRATEGIC PRIORITIES



Healthiest People – The people of Utah will be among the healthiest in the country.

Optimize Medicaid – Utah Medicaid will be a respected innovator in employing health care delivery and payment reforms that improve the health of Medicaid members and keep expenditure growth at a sustainable level.

A Great Organization – The UDOH will be recognized as a leader in government and public health for its excellent performance. The organization will continue to grow its ability to attract, retain, and value the best professionals and public servants.

Overview



Utah Choose Safe Places Program



Why safe cleaning and disinfecting is important



How to safely clean and disinfect for COVID-19



Healthy hand hygiene



Additional tools and resources

Why the concern?



Calls to U.S. poison centers about cleaners and disinfectants exposures increased by 20%

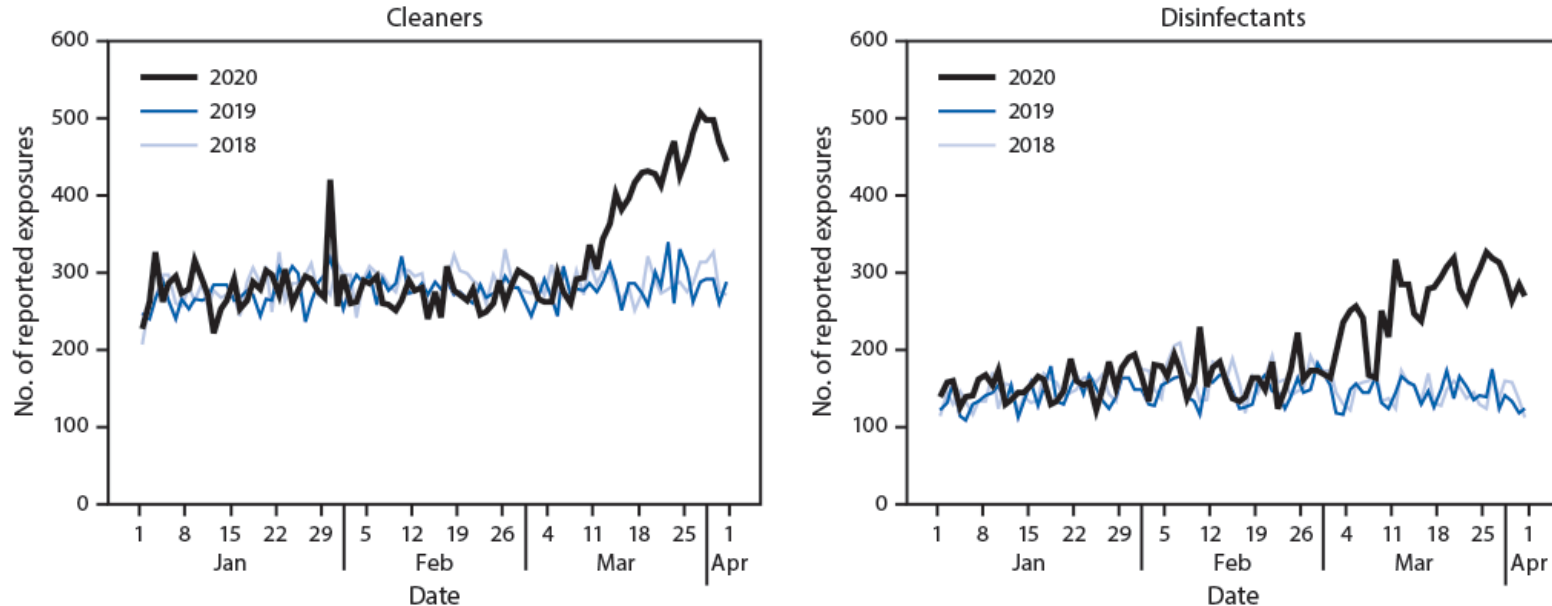


FIGURE. Number of daily exposures to cleaners and disinfectants reported to U.S. poison centers — United States, January–March 2018, 2019, and 2020*,

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6916e1.htm>

Utah Choose Safe Places Program



ENVIRONMENTAL HEALTH ASSESSMENT



Choose Safe Places
for Early Care and Education
Planning. Guidance. Protection.

UTAH DEPARTMENT OF HEALTH | Home | Health Services | A-Z List | FAQ | Data | About Us

Bureau of Epidemiology

Choose Safe Places | **Utah APPLETREE Program**

Main UCSP Page

Provider / Inspector Resources

Child Care Applicants: Environmental Risk Questionnaire

Licensing Inspectors: Environmental Risk Questionnaire

Safe Siting Information

ATSDR Safe Siting Website

ATSDR Safe Siting Guidance Manual

Utah Choose Safe Places Infographic

Utah Choose Safe Places
for Early Care and Education

Across the country, including Utah, child care and early education programs have been found in locations that could expose children and staff to environmental contamination. The Utah APPLETREE Program, in partnership with the Agency for Toxic Substances and Disease Registry (ATSDR), aims to reduce children's exposure to harmful environmental pollutants where they live, learn, and play by assisting with safe siting of early care and education facilities..

BECAUSE OUR KIDS ARE WORTH IT

Choose Safe Places - Call to Action Video

Watch later | Share

Utah APPLETREE

Environmental Issues Questionnaire for Child Care Center Applicants

Send completed forms to APPLETREE@utah.gov. Please return even if no issues are identified.

Applicant Information

Applicant name: _____

Name of child care center: _____

Address of child care center: _____

Property History

Current owner of property: _____

Building constructed in (year): _____

Does water come from a well? _____ If yes, most recent test date: _____

--- If available, please attach test results. For questions, email APPLETREE@utah.gov ---

The property was previously used as (check all that applies):

☐ Dry cleaner ☐ Other (please describe)

☐ Hair/nail salon

☐ Copy/print shop

☐ Funeral home

☐ Metal plating

☐ Shooting range

☐ Factory/manufacturing

☐ Gas station

☐ Auto repair shop

☐ Agriculture

☐ Landfill

☐ Smelting

Continued on reverse

1

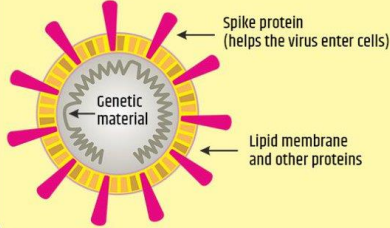
Salt Lake City, UT 84114 | UTAH DEPARTMENT OF HEALTH | (801) 538-6191

The Novel Coronavirus – COVID-19



COVID19

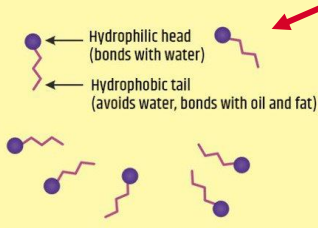
THE CORONAVIRUS has a membrane of oily lipid molecules, which is studded with proteins that help the virus infected cells.



Labels for the coronavirus diagram:

- Spike protein (helps the virus enter cells)
- Genetic material
- Lipid membrane and other proteins

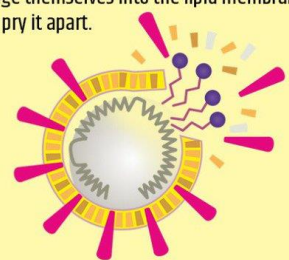
SOAP MOLECULES have a hybrid structure, with a head that bonds to water and a tail that avoids it.



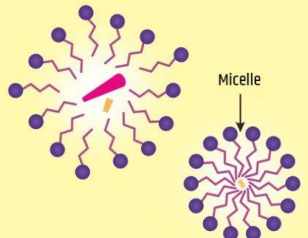
Labels for the soap molecule diagram:

- Hydrophilic head (bonds with water)
- Hydrophobic tail (avoids water, bonds with oil and fat)

SOAP DESTROYS THE VIRUS when the water-shunning tails of the soap molecules wedge themselves into the lipid membrane and pry it apart.



SOAP TRAPS DIRT and fragments of the destroyed virus in tiny bubbles called micelles, which wash away in water.



Label for the micelle diagram:

- Micelle

Surfactants

The Novel Coronavirus – COVID-19



Coronaviruses and Reducing the Risk of Exposure:

- Coronaviruses on surfaces and objects naturally die within hours to days.
- Normal routine cleaning with soap and water removes germs and dirt from surfaces.
- Disinfectants kill germs on surfaces.
 - EPA-approved disinfectants





Safe Cleaning & Disinfecting

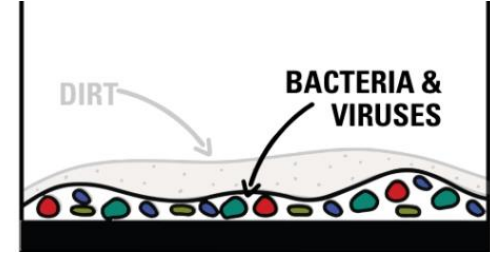


Cleaning vs Sanitizing vs Disinfecting



Cleaning removes germs, dirt, and grime from surfaces or objects.

Does not necessarily kill germs.



Contact Time or Dwell Time



- Contact Time or Dwell Time is the amount of time disinfectants need to remain wet on surfaces to properly disinfect.
- Range from 30 seconds to 10 minutes.
- Don't let dry before contact time ends.



Choosing Safer Cleaning Products



Question:

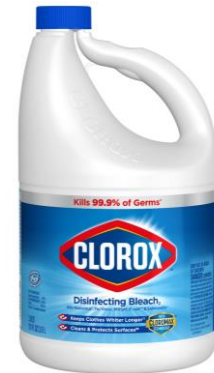
- What type of cleaning/disinfecting products do you currently use?
 - a. Bleach
 - b. Ammonia
 - c. Other

Common Disinfectants: Bleach



Bleach

- Most common disinfectant
- Dwell time usually 5 – 10 min
- Acute eye, throat & skin irritant
- Designated asthmagen
- Responsible for 62% increase in poison center calls



Common Disinfectants: QACs



Quaternary Ammonia Compounds

- Type of detergent
- Usual dwell times: 4 – 10 min
- Ammonia released during cleaning
- Causes skin and eye irritation
- Asthmagen
- Evidence in animal studies that it is a mutagen and reproductive harm



What are the health concerns?



Many common household cleaning products contain chemicals that can harm your body. Some of these chemicals can:

- cause or trigger asthma.
- cause cancer.
- irritate or chemically burn your lungs and skin.
- affect the health of unborn babies.

What are the health concerns?



The risk of experiencing these health effects depends on:

- how hazardous the product is and how concentrated it is.
- how often the product is used.
- the amount that gets into your body.
- the age and health of the person exposed.

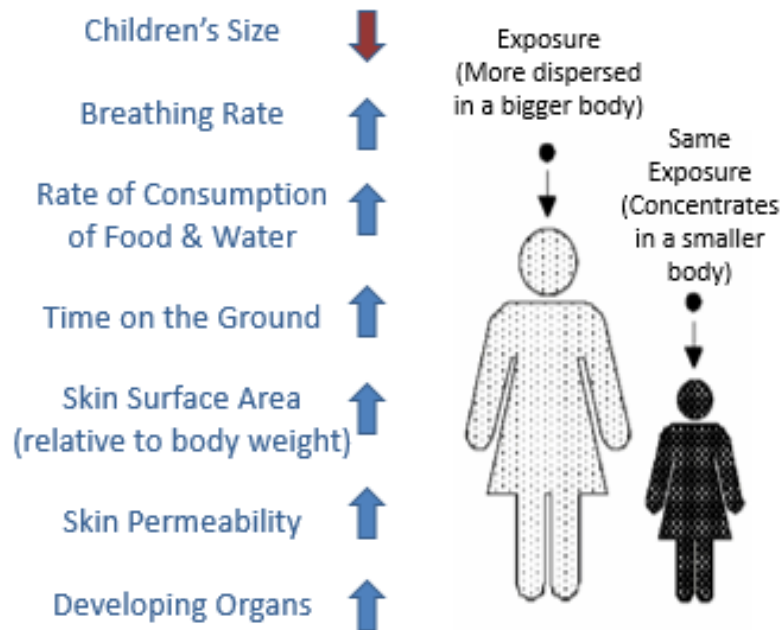
What are the health concerns?



Children are more at risk because:

- their bodies are still growing and developing.
- their bodies can't flush out harmful chemicals as fast.
- crawling and hand-to-mouth contact.

Children's Increased Vulnerability to Toxics (Compared to Adults)



Choosing Safer Cleaning Product



Question:

- Do you search for cleaning products that contain the words “green”, “natural” or “nontoxic” that appear on product labels?

Question:

- These products are safer and less toxic?

Choosing Safer Cleaning Product



- The words “**natural**”, “**nontoxic**”, and “**green**” that appear on product labels are **unregulated** by the government.
- Researchers have found that products labeled “green” often have as many **toxic chemicals** as conventional cleaning products.
- Cleaning products **do not** have to **list ingredients** on the label and manufacturers do not have to prove that they are safe before they market them.



Choosing Safer Cleaning Products



- Third-party certified cleaning products:



EPA's Design for the Environment



Antimicrobial Project

Active Ingredients for Use in Antimicrobial Products that Qualify for the DfE Logo

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Safer Choice

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Resources for Manufacturers

Partner of the Year Awards

Search Safer Choice Products

Search Products that Meet the Safer Choice Standard

EN ESPAÑOL

Looking for safer cleaning and other products? Use the search box below to find products that meet the Safer Choice Standard.



Search Products

Product or Company Name (Optional)

Home or Business Use (Optional)

Show only:

☐ Fragrance-free products¹

☐ Products with outdoor uses²

Product Type (Optional)

Active Ingredients	Year Approved
Citric acid	2009
Hydrogen peroxide	2009
L-lactic acid	2009
Ethanol	2012
Isopropanol	2012
Peroxyacetic acid	2015
Sodium Bisulfate	2015

<https://www.epa.gov/saferchoice/products#a04i000000WupsXAAR>

EPA's List-N Tool



Look for DfE Products on N list

Active Ingredients	Year Approved
Citric acid	2009
Hydrogen peroxide	2009
L-lactic acid	2009
Ethanol	2012
Isopropanol	2012
Peroxyacetic acid	2015
Sodium Bisulfate	2015



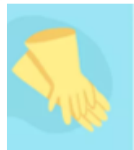
United States Environmental Protection Agency

List N Tool: COVID-19 Disinfectants

The screenshot shows the EPA List N Tool interface. On the left, there are several search filters: EPA Registration Number (with a green hash icon), Active Ingredient (with a blue molecular icon and highlighted by a red arrow), Use Site (with a building icon), Contact Time (with a clock icon), Browse All (with a yellow grid icon), and Keyword Search (with a red 'A' icon). On the right, there is a list of disinfectants under the heading 'All'. The list includes: 1,2-Hexanediol, Ammonium bicarbonate, Ammonium carbonate, Chlorine dioxide, Citric acid, Dodecylbenzenesulfonic acid, Ethanol (Ethyl Alcohol), Glutaraldehyde, Glycolic acid, Hydrochloric acid, Hydrogen chloride, Hydrogen peroxide, Hypochlorous acid, and Isopropanol (Isopropyl Alcohol).

<https://cfpub.epa.gov/giwiz/disinfectants/index.cfm>

What if all I have is Bleach or QACs?



Wear **gloves and eye protection**



Dilute disinfectants per the package instructions



Do not combine disinfectants or mix with other chemicals



Ventilate with open doors, windows and fans



Do not use around children

Dilution Recommendations



- Have a designated dilution station
- Don't disinfect if you only need to sanitize

To sanitize food contact surfaces:

- 1 Mix 2 tsp of Clorox® Disinfecting Bleach, w/ 1 gal. water
- 2 Remove food from surfaces
- 3 Wash, rinse & wipe surface with bleach solution for at least 2 min
- 4 Let air dry



To disinfect surfaces:

- 1 Mix ½ cup Clorox® Disinfecting Bleach, w/1 gal. water
- 2 Pre-wash surface
- 3 Mop or wipe w/bleach solution
- 4 Let solution contact surface for at least 5 min
- 5 Rinse well and air dry



*Hard, nonporous surfaces

Don't Play Chemist!



BLEACH + VINEGAR

Bleach and vinegar mixture produces chlorine gas, which can cause coughing, breathing problems, burning and watery eyes.



+



BLEACH + AMMONIA

Bleach and ammonia produce a toxic gas called chloramine. It causes shortness of breath and chest pain.



+



BLEACH + RUBBING ALCOHOL

Bleach and rubbing alcohol make chloroform, which is highly toxic.



+



HYDROGEN PEROXIDE + VINEGAR

This combination makes peracetic/peroxyacetic acid, which can be highly corrosive



+



Cleaning Equipment & Supplies



- **Microfiber** clothes are better at picking up dirt and grime
- Can wash and reuse



- **Sponges** can harbor bacteria
- Place in dishwasher or soak for 1 min in a ½ teaspoon of bleach to 1 quart of water solution



Are there other disinfecting methods?



Ultraviolet (UV) Light Hand Wands

- Effective in killing germs
 - **BUT** no concrete evidence for COVID-19
- Commercial wands aren't regulated & not enough sufficient scientific study on effectiveness.
- Can be harmful → cause cancer & damage eyes.
- Would not recommend use in ECEs.



What about other disinfectant methods?



Fogging (Fumigation or Misting)

- Fogging and wide area spraying may increase exposure to left over disinfectant.
- May be an electrical hazard.
- The CDC does not recommend the use of fogging for routine disinfecting.



CDC only recommends use of liquid surface disinfectants identified on List N, according to label directions, against COVID-19.



➤ Indoor areas:

- Clean and disinfect frequently touched (by many people) hard surfaces/objects often.
 - Door handles or knobs
 - Locks
 - Light switches
 - Tables and counters
 - Cabinet and appliance handles
 - Toilet flushers
 - Faucets





➤ Soft and porous materials like carpet or rugs:

- Consider removing soft or porous materials through high traffic areas.
- Thoroughly clean or launder materials.
- Disinfect materials if appropriate products are available.





➤ Outdoor areas:

- Maintain existing cleaning practices.
- High touch surfaces made of plastic or metal, such as grab bars and railings should be cleaned, but not disinfected routinely.
- Cleaning and disinfecting of wooden surfaces (play structures, benches, tables) is not recommended.



When and Where To Clean?



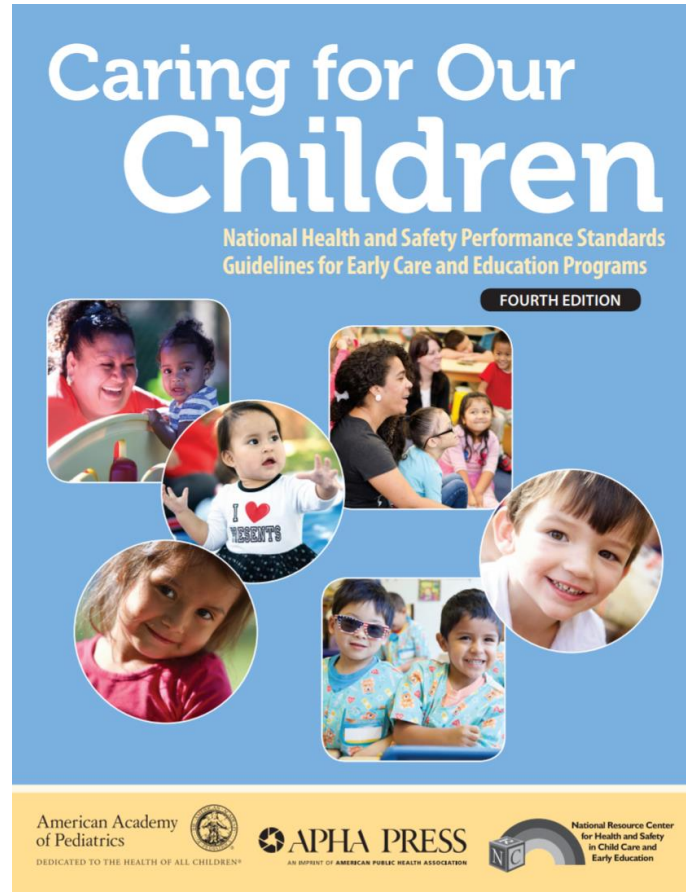
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Caring for Our Children: National Health and Safety Performance Standards

Routine Schedule for Cleaning, Sanitizing, and Disinfecting

Areas	Before Each Use	After Each Use	Daily (At the End of the Day)	Weekly	Monthly	Comments
Child Care Areas						
• Plastic mouthed toys		Clean	Clean, Sanitize			Can use dishwasher to sanitize
• Pacifiers		Clean	Clean, Sanitize			Reserve for use by only one child; Use dishwasher or boil for one minute
• Hats			Clean			Clean after each use if head lice present
• Door & cabinet handles			Clean, Disinfect			

When and Where To Clean?



<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-childcare.html#CleanDisinfect>

6 Steps for Safe and Effective Disinfectant Use



Step 1

- **Check that product is EPA approved**
- Check EPA's List N Tool at: epa.gov/listn



Step 2

- **Read the directions**
- Check “use sites” and “surface types”



Step 3

- **Pre-clean the surfaces**
- Use soap and water



Step 4

- **Follow the contact time**
- Surface should remain wet the whole time



Step 5

- **Wear gloves and wash your hands**
- Dedicate a pair for disinfecting COVID-19



Step 6

- **Lock it up**
- Store out of reach of children



Choosing Safer Cleaning Products



Question:

- It is safe to use cleaning or disinfecting products on hands or skin to prevent the spread of coronavirus?
 - a. Yes
 - b. No
 - c. Unsure



Healthy Hand Hygiene



Healthy Hand Hygiene



All children, staff, and volunteers should engage in hand hygiene at the following times:

- Arrival to the facility and after breaks
- Before and after preparing food or drinks
- Before and after eating or handling food, or feeding children
- Before and after administering medication or medical ointment
- Before and after diapering
- After using the toilet or helping a child use the bathroom
- After coming in contact with bodily fluid
- After playing outdoors or in sand
- After handling garbage

Hand Washing vs Hand Sanitizer



Hand Washing

- Any soap, liquid or bar soap, works.
- Wash hands with **soap** and **water** for at least **20 seconds**.
- Assist children with handwashing, including infants who cannot wash hands alone.
- Hand washing is always preferred to hand sanitizer



Hand Washing vs Hand Sanitizer



Hand Sanitizer

- Make sure you use hand sanitizer with at least **60% alcohol** (ethanol or isopropanol).
- Use enough to completely wet all areas of hands.
- Rub for at least **20 seconds** or until your hands feel dry.
- **Supervise** children when using hand sanitizer





U.S. FOOD & DRUG
ADMINISTRATION

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FDA Updates on Hand Sanitizers with Methanol



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**Drug Safety and
Availability**

Hand sanitizers consumers should not use

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**7/27/2020 PRESS RELEASE - Coronavirus (COVID-19) Update: FDA Reiterates
Warning About Dangerous Alcohol-Based Hand Sanitizers Containing Methanol,**

Summary



- Choose safer cleaning products from EPA's DfE and the N List.
- Read labels carefully and follow instructions.
- Clean first and then sanitize/disinfect.
- Ventilate, ventilate, ventilate!
- Properly store cleaning products away from children.
- Hand washing is preferred over hand sanitizer.

Resources & References



- **Utah CSP website:** <https://health.utah.gov/ucsp/>
- **EPA Safer Choice Standard:**
<https://www.epa.gov/saferchoice/products#a04i000000WupsXAAR>
- **CDC Guidance for Childcare Programs:** <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-schools.html>
- **Western States PEHSU Environmental Fact Sheet:** <https://wspehsu.ucsf.edu/main-resources/fact-sheets/>
- **EPA Use of UV, Ozone and Air Purifiers for COVID-19:** <https://www.epa.gov/coronavirus/why-arent-ozone-generators-uv-lights-or-air-purifiers-list-n-can-i-use-these-or-other>
- **EPA Fumigation for COVID-19:** <https://www.epa.gov/coronavirus/can-i-use-fumigation-or-wide-area-spraying-help-control-covid-19>
- **EPA 6 Steps for Safe and Effective Disinfectant Use:**
<https://www.epa.gov/sites/production/files/2020-04/documents/disinfectants-onepager.pdf>



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www.health.utah.gov/enviroepi/appletree



Questions?